Claims:

117. Ju

- 1. Method for the machining of wood workpieces, squared timbers, boards and the like in a machining installation, at least one machining aggregate being provided, in the feeding and discharge region of which one conveying system each is provided for the wood workpiece, wherein, if necessary, at least one conveying system also has a positioning system for the wood workpiece, and the machining aggregate carries out, if necessary, besides a machining of the front end region of the wood workpiece also other machinings on the wood workpiece.
- 2. Method according to claim 1, characterised in that the positioning system, respectively a measuring equipment connected with it, is normalised during the first machining of the wood workpiece by means of the machining aggregate to the respective position of the conveying system to the wood workpiece.
- 3. Method according to claim 1, characterised in that the conveying system recognises, collects and indexes the wood workpiece before a machining, and thus the respective position of the conveying system to the wood workpiece is normalised.
- 4. Method according to claim 1, characterised in that in the feeding and discharge region one conveying system each with a positioning system is provided, and the positioning systems of both conveying systems are normalised.
- 5. Method according to claim 1, **characterised in that** in the feeding and discharge region one conveying system each is provided with a positioning system and the positioning systems can be synchronised.
- 6. Method according to claim 1, characterised in that in the feeding and discharge region one conveying system each is provided with a positioning system and during the further machining the wood workpiece is positioned in the machining aggregate by the first as well as by the second conveying system as well as by both conveying systems.
- 7. Method according to claim 1, characterised in that the wood workpiece is machined on during its passage through at least one of the conveying systems by means of the machining aggregate, and thus a path carrying is made possible.

明新 剪

- 8. Method according to claim 1, characterised in that the wood workpiece is fixed before the machining, at least before the first machining.
- 9. Machining installation for the machining of wood workpieces, squared timbers, boards, stacks of boards and the like, a first conveying system for the wood workpiece being provided in a feeding region, which conveys fed wood workpieces to a machining aggregate and a second conveying system being provided on the discharge side of the machining aggregate, characterised in that at least one of the conveying systems (1, 2) conveys the wood workpiece (3) for or during further machinings of the machining aggregate (4) and at least one conveying system has a positioning system co-operating with the measuring equipment, making an exact positioning possible.
- 10. Machining installation according to claim 9, characterised in that the conveying regions (90, 91) of the first and the second conveying system (1, 2) join each other in the region of the machining aggregate (4) or overlap partly.
- 11. Machining installation according to claim 9, characterised in that at least one conveying system has a positioning system which co-operates with a measuring equipment, making an exact positioning and path carrying of the wood workpiece (3) in the machining aggregate (4) possible.
- 12. Machining installation according to claim 9, characterised in that the conveying system has at least one non-positively, respectively positively, acting coupling unit (20) by means of which the conveying system (2) is connected with the wood workpiece (3) for conveying, path carrying, respectively positioning, purposes.
- 13. Machining installation according to claim 9, characterised in that the first conveying system (1) is formed by at least one driven driving roller (10) which conveys the wood workpiece (3) supported by a machine table or a roller conveyor.
- 14. Machining installation according to claim 9, characterised in that a supporting beam (12) is provided which carries in particular on its respective beam end at least one driving roller (10).
- 15. Machining installation according to claim 9, characterised in that a supporting beam (12) extends parallel to the conveying direction (30).

4 B

- 16. Machining installation according to claim 9, characterised in that a supporting beam (12) is supported seesawing or rotatable around an axis.
- 17. Machining installation according to claim 9, characterised in that at least one driving beam (19) is provided which carries on its end a driving roller (10), the driving beam (19, 19') being supported seesawing, respectively rotatable, on the other end around an axis (201).
- 18. Machining installation according to claim 9, characterised in that the conveying system (2) is formed by a coupling unit (22) which can traverse along a guide line (21).
- 19. Machining installation according to claim 9, characterised in that the machining aggregate (4) has at least one tool (41) which can be positioned, respectively moved, at least along an axis, which is preferably rectangular to the conveying direction of the conveying system, and during the machining a path carrying by means of overlapping of the movement of the wood workpiece (3) is provided through the conveying system (1, 2) with the movement of the tool (41).
- 20. Machining installation according to claim 9, characterised in that the positioning system comprises a measuring equipment and the measuring equipment is formed by a measuring wheel (11) which rolls off on the wood workpiece (3).
- 21. Machining installation according to claim 9, characterised in that the first conveying system (1) is formed by at least one driven driving roller (10) which conveys the wood workpiece (3) supported by a machine table or a roller conveyor, and the positioning system comprises a measuring equipment and the measuring equipment is formed by a measuring wheel (11) which rolls off on the wood workpiece (3) and the measuring wheel (11') is located beneath the driving roller.
- 22. Machining installation according to claim 9, characterised in that the measuring equipment is formed by a measuring wheel (11) which rolls off on the wood workpiece (3) and the measuring wheel (11) is provided in the range of the machining aggregate (4).
- 23. Machining installation according to claim 9, characterised by a short distance between a driving roller (10) and the machining aggregate, respectively the tool (41, 42).

- 24. Machining installation according to claim 9, characterised in that the conveying system (2) is formed by a coupling unit (22) which can traverse along a guide line (21) and in the guide line (21) and the coupling unit (20) following after that a measuring equipment is provided.
- 25. Machining installation according to claim 9, characterised in that the finished wood workpiece (3) is deposited in the discharge region (91) on a supporting table (92), which can, if necessary, be lowered, or on supports (202) which can be lowered or removed and a pusher pushes away the wood workpiece (3) essentially rectangular to its longitudinal extension and the pusher traverses below the conveying system (2) without collisions.
- 26. Machining installation according to claim 9, characterised in that in the discharge region (91) several supports (202) are provided which can be lowered, if necessary.
- 27. Machining installation according to claim 9, characterised in that the wood workpiece, if necessary, can be lowered so far that a coupling carriage traverses without collisions.
- 28. Machining installation according to claim 9, characterised in that in the feeding region (90) a bearing cross conveyer is provided which supplies the wood workpieces.
- 29. Machining installation according to claim 9, characterised in that in the feeding region (90) a bearing cross conveyer is provided which supplies the wood workpieces and at the bearing cross conveyer at least one pull-in device is provided on which the wood workpieces are conveyed and orientated, the pull-in device then grasps the orientated wood workpiece and pulls it in and then the first conveying system conveys the wood workpiece on.
- 30. Machining installation according to claim 9, characterised in that in the feeding region (90) a bearing cross conveyer is provided which supplies the wood workpieces and the bearing cross conveyer conveys the wood workpiece to a stopper or a stop rail and the first conveying system is arranged in the direction of convey of the bearing cross conveyer before the stopper, and the first conveying system conveys a wood workpiece on as soon as it is in contact with the stopper.

- 31. Machining installation according to claim 9, characterised in that the first conveying system (1) is formed by at least one driven driving roller (10) which conveys the wood workpiece (3) supported by a machine table or a roller conveyor, and the width of the driving roller (10) is smaller than the smallest width of the wood workpiece which has to be machined on.
- 32. Machining aggregate for the machining of wood workpieces, the machining aggregate having at least two different tools (41, 42), a first tool (41) being supported above the wood workpiece (3) and a second tool (42) being supported below the wood workpiece (3).
- 33. Machining aggregate according to claim 32, characterised in that the first or second tool (41) is formed by a saw and the second or first tool (42) is formed by drill, mill, plane, inscribe, mark or special tools.
- 34. Machining aggregate according to claim 32, characterised in that the first and second tools (41, 42) are movable each independent from each other or coupled together, at least along an axis which is arranged in particular rectangular to the direction of conveying and the tools also can be positioned controlled and a movement of the tool (41, 42) is provided during the machining.
- 35. Machining aggregate according to claim 32, characterised in that the tools (41, 42) are designed in such a way that they can be turned, respectively be tilted.
- 36. Machining aggregate according to claim 32, characterised in that the tools (41, 42) are supplied in a tool magazine, on a tool sledge, in particular the second tools (42) are supplied in a rotatable supported tool turret.
- 37. Conveying system wherein the conveying system serves for the conveying and, if necessary, also positioning of the wood workpiece and the conveying system has a coupling unit which can traverse along a guide line, **characterised** in that the coupling unit (20) has two co-operating tongs parts (25, 26), at least one of them being movable, and the two tongs parts (25, 26) grasp the wood workpiece (3) from above and below.
- 38. Conveying system according claim 37, characterised in that the tongs parts (25, 26) are designed longitudinal and extend parallel to the direction of conveying (22).
- 39. Conveying system according to claim 37, characterised in that the tongs parts (25, 26) can grasp the wood

6

* ** **

workpiece from the side, along the whole length of the wood workpiece.

- 40. Conveying system according to claim 37, characterised in that for a further conveying of the wood workpiece the tongs parts release the wood workpiece, the coupling unit traverses to another point, preferably in the direction of the machining aggregate and there the wood workpiece is grasped again.
- 41. Conveying system according to claim 37, **characterised in that** the tongs parts (25, 26) co-operate at least non-positively, respectively positively, with the wood workpiece (3).
- 42. Transport system according to claim 37, characterised in that the tongs part is formed like a jaw or like a cutter.

Patent Attorney